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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,750	05/24/2001	Billy G. Moon	062891.0568	1922

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EXAMINER	
BARQADLE, YASIN M	

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/864,750	MOON, BILLY G.	
	Examiner	Art Unit	
	Yasin M. Barqadle	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/2001,10/04,2/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. Applicant's arguments filed on October 03, 2005 have been considered but are moot in view of the new ground(s) of rejection.

- Claims 1-38 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et al. (US Patent 6738362) hereinafter referred to as "Xu" in view of Salminen (US Patent 6463286) and further in view of Jagannathan et al US. Patent Number (6496871) here in after "Jagannathan" .

In regards to claim 1, Xu discloses a method for registering a mobile object with a foreign network, comprising:

executing the mobile object on a first virtual machine at a first router on a foreign network (col. 6 lines 65-67);

generating a care-of-name for the mobile object at a foreign object agent located on the foreign network (the foreign agent initiates the registration process, which when dealing with a network device includes any identifiers and appropriate security information, or in the case of a mobile device on a foreign network, a care of name to be associated with the care of address, col,7 lines 1-12, col. 4 line 55 - col. 5 line 4 also briefly discusses transferring identifiers and security information when registering on a mobile network).

communicating the care-of-name to a home object agent located on the home network (the registration information is sent to the home agent, including all associated identifiers, col. 7 lines 3-7).

generating a mobility binding for the mobile object at the home object agent, the mobility binding including the care-of-name (the home agent responds to the registration request with a care of address which binds the mobile user to the home agent, col. 7 lines 13-23).

Although Xu shows substantial features of the claimed invention, he does not explicitly show moving objects in response to unavailable resources in the home network.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Xu, as evidenced by Salminen USPN. (6463286).

In analogous art, Salminen whose invention is about a telecommunication system and a mobile station for providing a temporary selective national roaming at a predetermined network operation condition, disclose moving a mobile station and a copy of the subscriber data which can not be handled by the first home network is sent/switched to a visited network (foreign network) in response to unavailable resources in the home network [Col. 4, lines 15-34 and col. 5, lines 30-36 and col. 10, lines 25-64]. Giving the teaching of Salminen, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Xu by employing the system of Salminen in order to avoid a network overload on the home network and to provide with a flexible access to service of several networks for roaming user.

Although Xu and Salminen show substantial features of the claimed invention, they do not explicitly show the mobile object being computer language code.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Xu and Salminen, as evidenced by Jagannathan USPN. (6463286). In analogous art, Jagannathan whose invention is about a distributed agent software system and a method having enhanced process mobility and communication in a computer network "A particularly useful feature of the present invention is program mobility. The distributed agent system of the present invention incorporates several user-level migration methods for agents and objects, and one system-level migration method for threads." (Col. 11, lines 9-24 and col. 21, lines 25-28). Giving the teaching of Jagannathan, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Xu and Salminen by employing the enhanced process mobility system of Jagannathan because it allows the realization of mobility at both the agent and the object level. Tasks and data may freely and dynamically migrate among the machines in the network associated with creating their agent. By allowing objects and agents to migrate, the invention provides a

degree of adaptability and flexibility heretofore unachieved by the prior art (Col. 11, lines 9-24).

In regards to claim 2, Xu discloses providing an object name associated with the mobile object to the foreign object agent to create the care-of-name (each mobile device contains unique identifiers used to create a name for the device on the foreign network in the registration process, the identifiers used to associate a device to any given registration attempt, col. 7 lines 25-31 for an example).

In regards to claim 3, Xu discloses the care-of-name comprises an object name associated with the mobile object and an extension name to uniquely identify the mobile object on the foreign network (an extension name is provided for identifying the mobile Object, col. 8 lines 3-20).

In regards to claim 4, Xu discloses the home object agent operable to maintain network location information for the mobile object (the home object maintains network location information for the mobile device through use of the care of address supplied by the foreign agent, col. 7 lines 13-18).

In regards to claim 5, Xu discloses:

discovering the foreign object agent on the foreign network (the foreign agent discovers the mobile device, col. 6 lines 63-67, by receiving a broadcast message from the mobile device).

Receiving an address associated with the foreign object agent at the mobile object (the mobile device sends registration information to the foreign agent, which would include an address, col. 6 lines 63 - col. 7 line 12).

In regards to claim 6, Xu discloses locating the mobile object on the foreign network by using the care-of-name associated with the mobility binding (the home agent can use the registration information provided by the foreign agent to locate the mobile object on the network for tunneling information, col. 7 lines 25-45).

In regards to claim 7, Xu discloses determining if the mobile object is authorized to negotiate with the foreign object agent based on object credentials associated with the mobile object (the home agent authorizes the mobile object to negotiate with the foreign agent to access the network, col. 7 lines 3-12).

In regards to claim 8, Xu discloses:

determining if the mobile object is authorized to negotiate with the foreign object agent based on object credentials associated with the mobile object (the home agent authorizes the mobile object to negotiate with the foreign agent to access the network, col. 7 lines 3-12);

providing authorization for the foreign object agent to communicate with the home object agent based on agent credentials associated with the foreign object agent if the mobile object is authorized to negotiate with the foreign object agent (once the mobile device has been determined to be authorized to negotiate with the foreign agent, the home agent creates a pathway between the home and foreign agents for communication, col. 7 lines 13-24).

In regards to claim 9, Xu discloses:

determining if the mobile object is authorized to negotiate with the foreign object agent based on object credentials associated with the mobile object (the home agent authorizes the mobile object to negotiate with the foreign agent to access the network, col. 7 lines 3-12);

providing authorization for the foreign object agent to communicate with the home object agent based on agent

credentials associated with the foreign object agent if the mobile object is authorized to negotiate with the foreign object agent (once the mobile device has been determined to be authorized to negotiate with the foreign agent, the home agent creates a pathway between the home and foreign agents for communication, col. 7 lines 13-24);

authenticating the object credentials at the home object agent to create the mobility binding for the mobile object if the foreign object agent receives authorization to communicate with the home object agent (once the above two steps have been completed, the binding to the home agent is created, having already authorized the mobile client beforehand, col. 7 lines 3-12).

In regards to claim 10, Xu discloses:

copying the mobile object to create a duplicate mobile object on a second virtual machine at a second router located on the foreign network (the mobile device can be transferred to a second router on the foreign network, col. 8 line 57 - col. 9 line 11);

creating a duplicate mobility binding at the home agent for the duplicate mobile object by obtaining a duplicate care-of-name from the foreign object agent (the home agent binding is

copied to the new foreign agent location, col. 8 line 57 - col. 9 line 11).

In regards to claim 11, Xu discloses:

moving a portion of the mobile object to a second virtual machine at a second router located on the foreign network (the mobile device can be partially transferred to a second router on the foreign network, col. 8 line 57 - col. 9 line 11);

creating a secondary mobility binding at the first router for the portion of the mobile object by obtaining a secondary care-of-name from the foreign object agent (the home agent binding is copied to the new foreign agent location, col. 8, line 57 - col. 9 line 11).

In regards to claim 12, Xu discloses a method for registering a mobile object with a foreign network, comprising:

executing a mobile object on a virtual machine at a router on a foreign network (col. 6 lines 65-67);

generating a care-of-name for the mobile object at a foreign object agent located on the foreign network (the foreign agent initiates the registration process, which when dealing with a network device includes any identifiers and appropriate security information, or in the case of a mobile device on a

foreign network, a care of name to be associated with the care of address, col. 7 lines 1-12, col. 4 line 55 - col. 5 line 4 also briefly discusses transferring identifiers and security information when registering on a mobile network);

communicating the care-of-name to a home object agent located on a home network (the registration information is sent to the home agent, including all associated identifiers, col. 7 lines 3-7);

generating a mobility binding for the mobile object at the home object agent, the mobility binding including the care-of-name (the home agent responds to the registration request with a care of address which binds the mobile user to the home agent, col. 7 lines 13-23);

locating the mobile object on the foreign network by using the care-of-name associated with the mobility binding (the home object maintains network location information for the mobile device through use of the care of address supplied by the foreign agent, col. 7 lines 13-18).

As per the limitation of moving a mobile object from a home network to a foreign network in response to unavailable resources at the home network and the mobile object being computer language code see the rejection of claim 1 above.

In regards to claim 13, Xu discloses the care-of-name comprises an object name associated with the mobile object and an extension name to uniquely identify the mobile object on the foreign network (each mobile device contains unique identifiers used to create a name for the device on the foreign network in the registration process, the identifiers used to associate a device to any given registration attempt, col. 7 lines 25-31 For an example);

generating a care-of-address associated with the care-of-name for the mobile object at the foreign object agent (the foreign object receives information from the home agent, used to create a care-of-address for the mobile agent, col. 7 lines 13-23);

establishing a tunnel between the home object agent and the mobile object by using the care-of-address as an endpoint of the tunnel (the tunnel is created between the home agent and the mobile object, col. 7 lines 13-23).

In regards to claim 15, Xu discloses the care-of-address comprises an Internet Protocol address (col. 7 lines 13-18).
In regards to claim 16, Xu discloses the home object agent operable to maintain network location information for the mobile object (the home object maintains network location information

for the mobile device through use of the care of address supplied by the foreign agent, col. 7 lines 13-18).

In regards to claim 17, Xu discloses a router comprising a virtual machine configured to host a mobile object, the mobile object operable to:

negotiate with a foreign object agent Located on a foreign network for a care-of- name (after supplying the foreign agent with registration information including name and security identifiers, the foreign agent initiates the registration process, which when dealing with a network device includes any identifiers and appropriate security information, or in the case of a mobile device on a foreign network, a care of name to be associated with the care of address, col.7 lines 1- 12, col.4 Line 55 - col.5 Line 4 also briefly discusses transferring identifiers and security information when registering on a mobile network);

obtain a mobility binding from a home object agent Located on a home network by using the care-of-name (the home agent responds to the registration request with a care of address which binds the mobile user to the home agent, col.7 lines 13-23).

As per the limitation of moving a mobile object from a home network to a foreign network in response to unavailable resources at the home network and the mobile object being computer language code see the rejection of claim 1 above.

In regards to claim 18, Xu discloses the mobile object operable to provide an object name associated with the mobile object to the foreign object agent (each mobile device contains unique identifiers used to create a name for the device on the foreign network in the registration process, the identifiers used to associate a device to any given registration attempt, col.7 Lines 25-31 for an example).

In regards to claim 19, Xu discloses the care-of-name comprises an object name associated with the mobile object and an extension name that uniquely identifies the mobile object on the foreign network (an extension name is provided for identifying the mobile object, col.8 lines 3-20).

In regards to claim 20, Xu discloses the home object agent operable to:

host the mobile object on the home network (fig.2);

maintain network location information for the mobile object (col.7 Lines 3-12).

In regards to claim 21, Xu discloses the home object agent operable to:

discover the foreign object agent on the foreign network through an agent solicitation message (the foreign agent sends a message to the home agent, col.7 Lines 3-12);

receive an address associated with the foreign object agent (in the above message, the foreign agent supplies an address)

In regards to claim 22, Xu discloses an agent virtual machine configured to host the foreign object agent (col.6 Line 63 - col.7 Line 12).

In regards to claim 23, Xu discloses the mobile object operable to:

create a duplicate mobile object operable to be hosted on a duplicate virtual machine at a duplicate router on the foreign network (the mobile device can be transferred to a second router on the foreign network, col.8 line 57 - col.9 Line 11);

obtain a duplicate mobility binding from the home object agent by receiving a duplicate care-of-name from the foreign

object agent (the home agent binding is copied to the new foreign agent location, col.8 Line 57 - col.9 Line 11).

In regards to claim 24, Xu as modified teach the mobile object operable to:

move a portion of the mobile object to a duplicate virtual machine at a duplicate router on the foreign network (the mobile device can be partially transferred to a second router on the foreign network, col.8 Line 57 - col.9 Line 11);

obtain a secondary mobility binding at the router for the portion of the mobile object by obtaining a secondary care-of-name from the foreign object agent (the home agent binding is copied to the new foreign agent location, col.8 line 57-col.9 line 11).

In regards to claim 25, Xu discloses:

a mobile object operable to send object credentials to the foreign object agent to obtain authorization to negotiate with the foreign object agent (the home agent authorizes the mobile object to negotiate with the foreign agent to access the network, col.7 Lines 3-12);

the mobile object obtaining the mobility binding if the home object agent provides authorization for the foreign object

agent to communicate with the home object agent and authenticates object credentials associated with the mobile object (once the above step has been completed, the binding to the home agent is created, having already authorized the mobile client beforehand, col.7 Lines 3-12).

Claims 26-38 have similar limitations as claims 1-25, therefore, they rejected with the same rationale. See claims 1-25.

Conclusion

3. **ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

Art Unit 2153

KRISNA LIM
PRIMARY EXAMINER